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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,409	02/25/2002	Douglas B. Dority	020048-002000US	8156

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EXAMINER

NAGPAUL, JYOTI

ART UNIT

PAPER NUMBER

1743

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/084,409

Applicant(s)

DORITY ET AL.

Examiner

Jyoti Nagpaul

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) 17-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 26-48 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/19/03, 5/21/02</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1,12, 26-27,30-32,34-37,42-43,46** are rejected under 35 U.S.C. 102(b) as being anticipated by Gundelfinger (US 4068528).

Gundelfinger discloses a liquid handling device. The device comprises a housing (10) having a plurality of chambers (F1-F6); and a valve body (10) including a first fluid processing region (30a) continuously coupled fluidically with a fluid displacement region (50), the fluid displacement region (50) being depressurizable to draw fluid into the fluid displacement region (30a) by a syringe/fluid displacement member (28) and pressurizable to expel fluid from the fluid displacement region (50) by a syringe/fluid displacement member (28), the valve body (10) including a plurality of external ports (F2, 22d), the first fluid processing region (30a) being fluidically coupled with at least two of the external ports (see Figure 11), the fluid displacement region (50, FC) being fluidically coupled with at least one of the external ports (22d,F2) of the valve body (10), and the valve body (10) being adjustable with respect to the housing to allow the external ports is placed selectively in fluidic communication with the plurality of chambers wherein at least one of the plurality of chambers is a processing chamber, the processing chamber including a first port and a second port for selectively

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communicating with at least one of the external ports of the valve body, the processing chamber providing an additional fluid processing region. (See Figures 10 and 11)

According to Fig. 11, At least one of the chambers (F1-F6) is a processing chamber having an inlet and outlet ports for selectively communicating with the external port of the valve body (10). The processing chamber (F2) includes a receiving area and retaining area depending on the position of the valve body for receiving a processing module. The device further comprises a crossover channel (RA), the valve body being adjustable with respect to the housing to place the crossover channel in fluidic communication with an aspiration chamber (P5) and a source chamber (P2) to permit aspiration of a fluid from the source chamber through the crossover channel to the aspiration chamber. (See Figure 10) It appears the crossover channel (RA) is a circular arc lying on a common crossover channel radius from the axis. (See Figure 11) The device further comprises a cover (92).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
6. **Claims 2-11,13-16,28-29,33,47-48** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gundelfinger in view of Sakai (US 4937048).

Refer above for the teachings of Gundelfinger.

Gundelfinger fails to teach about the fluid processing material, such as solid phase material and comprises at least on liquid phase material.

Sakai teaches a carrier/bead transporting apparatus for use in an immunological analysis which supplies and/or discharges the predetermined number of carriers/beads into and/or from reaction vessels. Sakai recites "The enzyme-immuno-assay is further classified into homogeneous enzyme immuno-assay and heterogeneous enzyme-immuno-assay. In the homogeneous analysis, a variation in activity of labeling enzyme due to existence or non-existence of the immunological reaction is directly measured to detect substances to be analyzed. In the heterogeneous analysis, use is made of

insoluble carriers such as glass beads or synthetic resin particles on which antigen or antibody has been fixed, enzyme-labeled antigen or antibody bound with the antibody or antigen fixed on the carriers and free enzyme-labeled antigen or antibody not bound with the antibody or antigen on the carriers are separated from each other by washing treatment, and then an activity of labeling enzyme is detected to measure a quantity of substances to be analyzed.” (See Col. 1, Lines 43-49)

It is conventionally known in the art of immuno-assay analysis. It would have been obvious to one of ordinary skill in this art at the time of the invention by applicant to modify the system of Gundelfinger such that the fluid processing fluid comprises of beads in order to obtain desired accurate and precise analysis of the sample.

7. **Claims 38-41** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gundelfinger in view of Lecerf (US 4705059).

Refer above for the teachings of Gundelfinger.

Gundelfinger fails to teach a transmitting member coupled with the fluid processing region for transmitting energy.

Lecerf discloses a fluid dispensing device. The device comprises an energy transmitting member (14) coupled to the fluid processing region (12) through a cover (12).

It is well known in the art of ink jet printing to use ultrasonic transducers to use ultrasound to move fluid. It would have been obvious to one of ordinary skill in this art at the time of the invention by applicant to provide a transmitting member such as a

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transmitting ultrasonic energy through the cover into the fluid processing region in order to provide accurate movement of very small quantities of fluid.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jyoti Nagpaul whose telephone number is 571-272-1273. The examiner can normally be reached on Monday thru Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JN


Jill Warden
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